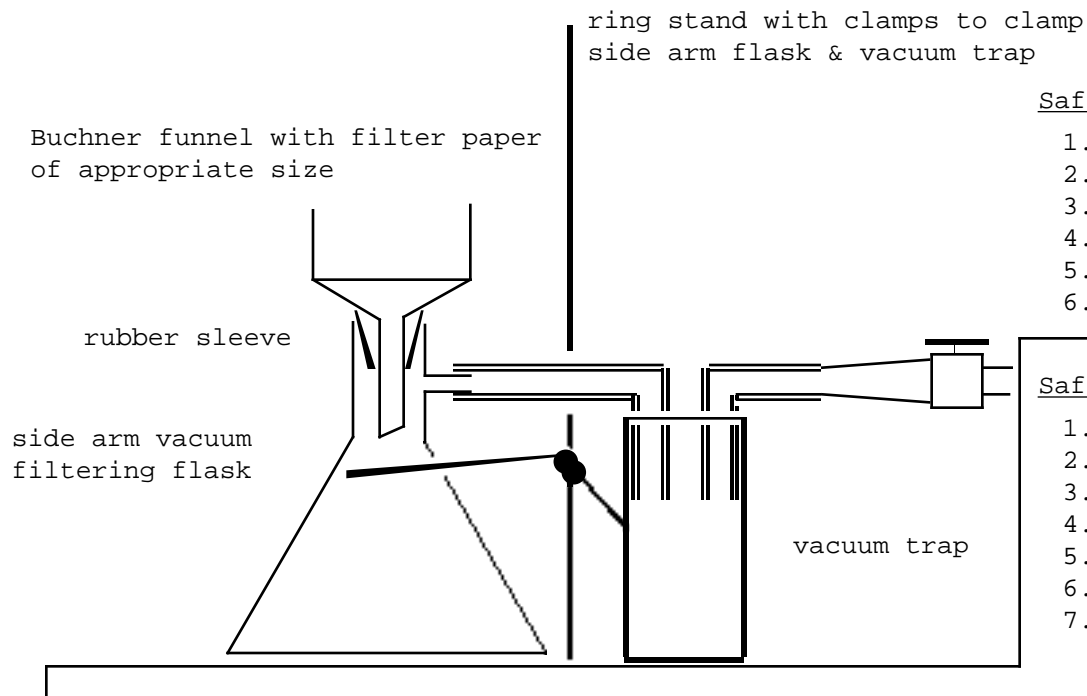


**vacuum filtration** 1. used to rapidly remove solvent away from recrystallized product



Safeties when conducting a recrystallization

1. never leave a flask unattended on a hot plate
2. swirl boiling mixture constantly
3. recrystallize from a flask of appropriate size
4. cap/cool using a stopper of appropriate size
5. use an ice/water bath at your bench
6. parafilm all stoppered solutions stored in locker

Safeties when conducting a vacuum filtration

1. never vacuum filter hot solutions
2. always use a vacuum trap
3. always remove the filtrate immediately
4. contaminate the pump oil, replace it immediately
5. always use a ring stand & clamps
6. use filter paper of appropriate size
7. don't forget your rubber sleeve

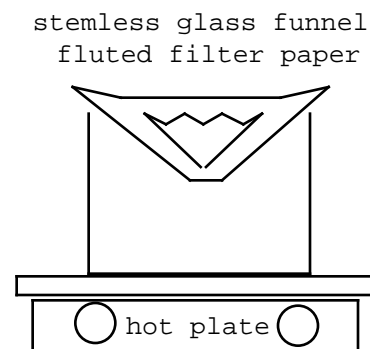
**hot gravity filtration** 1. use hot gravity filtration to remove insoluble impurities when recrystallizing solute  
2. use hot gravity filtration to remove insoluble activated charcoal

Safeties when conducting a hot gravity filtration

1. use a hot plate set to an appropriate setting
2. use water as a heat sink, don't place an empty beaker directly on a hot plate
3. use a stemless funnel
4. use fluted filter paper
5. evaporate down (concentrate down) with a boiling chip in a beaker
6. transfer filtrate to a flask of appropriate size to recrystallize
7. NEVER recrystallize in a beaker, recrystallize always in a capped Erlenmyer flask

Safeties when working with activated charcoal

1. don't breath in the dust
2. wipe up all spills with a wet paper towel
3. don't get it on your cloths
4. don't add activated charcoal to a hot solution
5. decolorize with about a thumb's worth of activated charcoal added to warm solutions
6. remove by hot gravity filtration insoluble activated charcoal
7. if crystals form in the filter paper, redissolve with hot solvent
8. place filtered charcoal in the trash

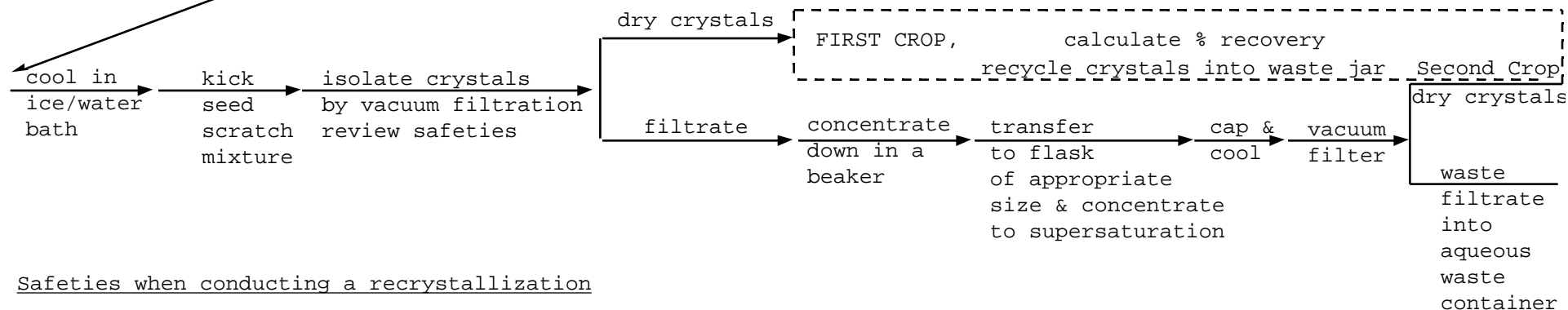


**Part B** Recrystallization on Pure Acetanilide & Baseline Yield Data Measurement  
**two trials**  
**weigh & recycle final crystals**

review all safeties → weigh 1.000g pure acetanilide → add 30mL H<sub>2</sub>O and boil → boil 10 min → mark level to achieve supersaturation → cap & cool

Safeties when weighing compounds on the balances

1. use a powder funnel to transfer chemicals
2. measure chemicals directly over the powder funnel
3. never tap chemicals downward onto the balance
4. never measure chemicals outside the balance
5. never leave snail trails of chemicals
6. have your notebook in hand while weighing samples
7. contact your instructor if you have made a mess



Safeties when conducting a recrystallization

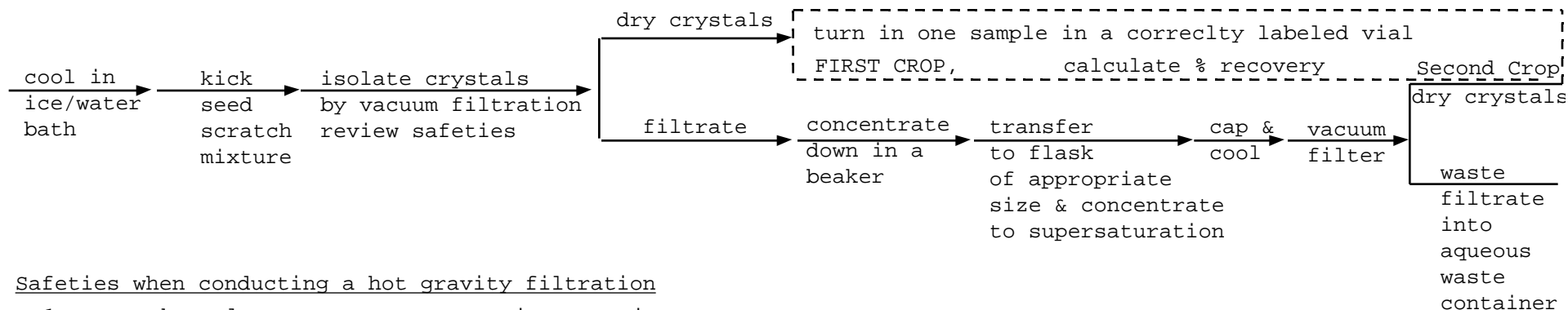
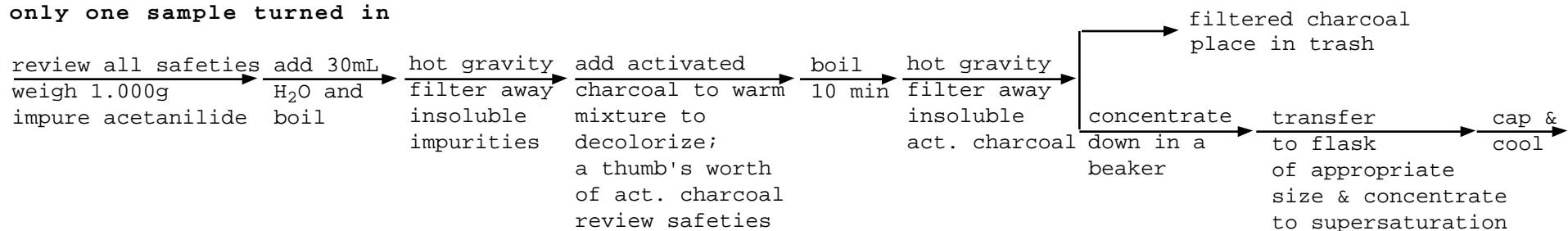
1. never leave a flask unattended on a hot plate
2. swirl boiling mixture constantly
3. recrystallize from a flask of appropriate size
4. cap/cool using a stopper of appropriate size
5. use an ice/water bath at your bench
6. parafilm all stoppered solutions stored in your locker

Safeties when conducting a vacuum filtration

1. never vacuum filter hot solutions
2. always use a vacuum trap
3. always remove the filtrate immediately
4. contaminate the pump oil, replace it immediately
5. always use a ring stand & clamps
6. use filter paper of appropriate size
7. don't forget your rubber sleeve

**Part C** Recrystallization on Impure Acetanilide with Hot Gravity Filtration & Activated Charcoal  
**two trials**  
**save final crystals**  
**only one sample turned in**

Hot gravity filtration to remove insoluble impurities



#### Safeties when conducting a hot gravity filtration

1. use a hot plate set to an appropriate setting
2. use water as a heat sink, don't place an empty beaker directly on a hot plate
3. use a stemless funnel
4. use fluted filter paper
5. evaporate down (concentrate down) with a boiling chip in the beaker
6. transfer filtrate to a flask of appropriate size to recrystallize
7. NEVER recrystallize in a beaker, recrystallize always from a capped Erlenmyer flask

#### Safeties when working with activated charcoal

1. don't breath in the dust
2. wipe up all spills with a wet paper towel
3. don't get it on your cloths
4. don't add activated charcoal to a hot solution
5. add about a thumb's worth to cold or warm solutions to decolorize
6. remove by hot gravity filtration insoluble activated charcoal
7. if crystals form in the filter paper, redissolve with hot solvent
8. place filtered charcoal in the trash